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ABSTRACT

A study evaluated several characteristics of authors published for the first time in two basic science research journals: "Brain Research," a well-established journal founded in 1966 (the first of its type); and "Brain Research Bulletin," a more recent journal founded in 1976. For the weekly "Brain Research," new authors were selected from every third article of the first issue of each month in 1981, while for the monthly "Brain Research Bulletin," each issue was used for author selection. Various characteristics of the representative authors were studied, including number of years elapsed since obtaining a doctoral degree (authors were divided into four groups in this category) and number of articles written that had been cited within the last five years. Results indicated that the two journals differed significantly only for the authors who had completed a doctorate in the last five years. They were published more frequently in "Brain Research" (major journal) than in "Brain Research Bulletin" (minor journal), and were statistically higher in every category examined. Findings suggest that less established researchers prefer to publish first in the major journal, "Brain Research," probably to achieve recognition. However, "Brain Research Bulletin" is used by more established researchers who contribute to the quality of the publication, making it a strong secondary journal. (NKA)

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A Comparison Study of Research Journal First Authors

The objective of this study was to evaluate several characteristics of first authors of articles found in a well established older (major) journal and those of first authors found in a newer (minor) journal. I chose for my comparison study two research journals in an area of basic science, Brain Research and Brain Research Bulletin.

Brain Research began publication in 1966. It's scope and purpose are to provide a medium for prompt publication of articles relating to basic research in the neurosciences. Clinical studies are not included unless they have direct bearing on fundamental knowledge of the brain. Brain Research is published weekly and averages 25 articles per issue. Neuroscience as a discipline has burgeoned only since the 1960's, thus the relative youth of the journal. Brain Research was the first journal that published basic research in the neurosciences.

Brain Research Bulletin began publication in 1976. It is a spin-off of Brain Research and is published by a different company. It's aims and scope are to publish new and significant information concerning all aspects of the nervous system. It includes brief reports, some reviews and theoretical articles, results of symposia, book reviews, announcements and meeting reports. Brain Research Bulletin is published monthly and averages 13 articles per issue.

In brief comparison, then, on the one hand is a journal 16 years old, the first of its type, averaging 1,300 articles per year; on the other hand is a journal 6 years old, a spin-off of the older journal, averaging 156 articles per year, and containing news items in addition to original research articles.

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The purpose of this study was to determine whether the first authors of articles that were published in these journals were comparable or different in terms of: (1) length of time since receiving their doctorate degree. The assumption is made that a shorter length of time since receipt of the advanced degree would imply a less well established researcher, i.e. a newer researcher; (2) the number of citations received by an individual during the past 5 years in Science Citation Index. A low number of citations received by an individual may be interpreted as being the result of being new to the field of research, to lack of interest in a particular individual's work, or lack of prolificacy; (3) the number of articles written by each author listed in Science Citation Index. The same comments made in #2 could apply here.

EXPERIMENTAL DESIGN

Brain Research: First authors were selected from every third article of the first issue of each month in 1981. Difficulty was encountered in finding the dates of receipt of dissertation in the case of foreign authors, so these authors were not included, but were replaced by Americans who were the first author of the 6th from the last article (using the first issue of every month). A total of 12 authors were selected.

Brain Research Bulletin: Selection of authors was essentially the same, the only difference being that each issue was used since this is a monthly publication.

The year of dissertation receipt by the authors was obtained using the database, Comprehensive Dissertation Abstracts.

The characteristics of the author's that were studied were as follows:

(1) The number of years since obtaining the Ph.D. degree (characterized by the completion of a dissertation).

(2) The number of citations an author received in Science Citation Index. An actual number was tallied.

(3) The number of articles written by an individual that had been cited within the last five years. Again, an actual number was tallied.

The authors were then split into four groups as follows:

Group A: 1-5 years since receiving dissertation

Group B: 6-10 years since receiving dissertation

Group C: 11-15 years since receiving dissertation

Group D: 16+ years since receiving dissertation

In this manner, "like" authors were compared with "like" authors.

Finally, also considered was the distribution of authors within the journals in terms of the four groups.

Calculated means were subjected to statistical analysis using the pooled student's "t" test.

RESULTS

The results are presented in Table 1 at the end of this report.

DISCUSSION

The most obvious findings of this study were that (1) author's in Group A (1-5 yrs.) Brain Research, although having newly acquired doctorate degrees and relatively few articles that had been cited, were the group most frequently represented in Brain Research, and (2) they were statistically significantly higher than their comparable group in Brain Research Bulletin in every category. Interestingly, these individuals had completed their dissertation, on the average, 4 years ago, as compared to only 1.5 years for those publishing

in Brain Research Bulletin. Also, this was in direct contrast to a similar comparison study done for clinical medical journals (J. Shafer, University of Iowa, Information Science Class, Fall, 1982) where the average time length between receiving an M.D. degree and publication in the major journal Annals of Internal Medicine was 8.5 years.

From these observations, one could conjecture that individuals with more recent doctorate degrees are eager to publish in a major journal, and are able to do so in the case of Brain Research, although not for an average of 4 years after receiving their degree. Overall, 60 percent of the contributors to Brain Research had received their Ph.D. degrees within the last 10 years, as compared to 48 percent of those contributing to Brain Research Bulletin.

Between the other groups in the study (B, C and D) there were no statistical differences in any of the categories, due in large part to the variability of data that this type of study encounters. It is interesting to note, however, that the group means in the years since dissertation category are very similar, particularly in Groups B and C. Two particularly prolific people contributed to the higher means in Brain Research, Group C, in the number of citations and number of articles cited categories.

A final point of interest is that, compared to first author's publishing in medical journals (Shafer study), the number of citations and articles being cited is much increased among basic researchers, reflecting the "publish or perish syndrome" often attributed to researchers. Apparently, M.D.'s do not suffer from this malady to quite the same extent.

CONCLUSIONS

The fact that Brain Research Bulletin (minor journal) does not differ significantly from Brain Research (major journal) in any group but

Group A (1-5 yrs.), points out that although it is 10 years younger than the major journal, it is a strong secondary journal. More established researchers appear to be using the journal, contributing to the quality and authority of it. Less well established researchers, however, much prefer to publish in the major journal, Brain Research, probably to attain recognition by having their work in the foundation journal.

Table 1

Tabular and Statistical* Results

Group	Author's Distribution within Journals (percent)		
	Br. Research		Br. Res. Bulletin
A (1-5)	42		16.7
B (6-10)	16.7		42
C (11-15)	16.7		25
D (16+)	25		16.7
	Years since Dissertation		
A (1-5)	4.0	P≤.05	1.5
B (6-10)	8.5	NS	6.8
C (11-15)	12.5	NS	12.7
D (16+)	24.7	NS	17.0
	Number of Citations		
A (1-5)	14.0	P≤.02	1.0
B (6-10)	28.5	NS	39.6
C (11-15)	304.5	NS	148.5
D (16+)	84.0	NS	69.0
	Number of Articles Cited		
A (1-5)	6.6	P≤.05	1.0
B (6-10)	10.5	NS	12.6
C (11-15)	64.0	NS	19.7
D (16+)	32.0	NS	11.3

*Using pooled student's "t" test; figures presented are means.